

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-65. (Cancelled).

66. (Previously amended): A DNA segment having a sequence encoding a chimeric polypeptide comprising the extracellular domain of an insoluble human TNF receptor polypeptide having an apparent molecular weight of about (a) 55 kilodaltons or (b) 75 kilodaltons on a non-reducing SDS-polyacrylamide gel, functionally attached to a Fc portion and hinge region of an IgG heavy chain polypeptide.

67. (Previously amended): A recombinant vector incorporating a DNA segment having a sequence encoding a chimeric polypeptide comprising the extracellular domain of an insoluble human TNF receptor polypeptide having an apparent molecular weight of about (a) 55 kilodaltons or (b) 75 kilodaltons on a non-reducing SDS-polyacrylamide gel, functionally attached to a Fc portion and hinge region of an IgG heavy chain polypeptide.

68. (Previously amended): A DNA sequence which encodes a chimeric protein and comprises (i) a first DNA subsequence joined to (ii) a second DNA subsequence, wherein the first DNA subsequence encodes the soluble portion of an insoluble human tumor necrosis factor binding protein having an apparent molecular weight of about (a) 55 kilodaltons or (b) 75 kilodaltons on a non-reducing SDS-polyacrylamide gel, wherein the soluble portion is capable of binding to human tumor necrosis factor, and wherein the second DNA subsequence encodes all of the domains, other than the first domain, of the constant region of the heavy chain of a human immunoglobulin.

69. (Cancelled).

70. (Previously added): The DNA of claim 68 wherein the human immunoglobulin is IgG.

71. (Withdrawn).

72. (Previously added): The DNA of claim 70 wherein the IgG is IgG3.

73. (Previously added): The DNA of claim 72 wherein the first DNA subsequence is ligated into the vector pCD4-Hy3 from which the CD4 cDNA insert has been removed via its SstI restriction sites.

74-78. (Withdrawn).

79. (Previously added): The DNA of claim 68 wherein the insoluble human tumor necrosis binding protein has an apparent molecular weight of about 55 kilodaltons on a nonreducing SDS-polyacrylamide gel.

80. (Previously added): The DNA of claim 79 wherein the human immunoglobulin is IgG.

81. (Withdrawn).

82. (Previously added): The DNA of claim 80 wherein the IgG is IgG3.

83. (Previously added): The DNA of claim 82 wherein the first DNA subsequence is ligated into the vector pCD4-Hy3 from which the CD4 cDNA insert has been removed via its SstI restriction sites.

84. (Previously amended): A DNA encoding a chimeric protein prepared by a process which comprises joining a first DNA subsequence to a second DNA subsequence, wherein the first DNA subsequence encodes the soluble portion of an insoluble human tumor necrosis factor binding protein having an apparent molecular weight of about (a) 55 kilodaltons or (b) 75 kilodaltons on a non-reducing SDS-polyacrylamide gel, wherein the soluble portion is capable of binding to human tumor necrosis factor, and wherein the second DNA subsequence encodes all of the domains, other than the first domain, of the constant region of the heavy chain of a human immunoglobulin.

85. (Cancelled).

86. (Previously added): The DNA of claim 84 wherein the human immunoglobulin is IgG.

87. (Withdrawn).

88. (Previously added): The DNA of claim 86 wherein the IgG is IgG3.

89. (Previously added): The DNA of claim 88 wherein the first DNA subsequence is ligated into the vector pCD4-Hy3 from which the CD4 cDNA insert has been removed via its SstI restriction sites.

90-94. (Withdrawn).

95. (Previously added): The DNA of claim 84 wherein the insoluble human tumor necrosis binding protein has an apparent molecular weight of about 55 kilodaltons on a nonreducing SDS-polyacrylamide gel.

96. (Previously added): The DNA of claim 95 wherein the human immunoglobulin is IgG.

97. (Withdrawn).

98. (Previously added): The DNA of claim 96 wherein the IgG is IgG3.

99. (Previously added): The DNA of claim 98 wherein the first DNA subsequence is ligated into the vector pCD4-Hy3 from which the CD4 cDNA insert has been removed via its SstI restriction sites.

100. (New): A method of making a recombinant DNA construct encoding a chimeric polypeptide comprising fusing a first DNA sequence which encodes a soluble fragment of an insoluble human TNF receptor having an apparent molecular weight of about 55 kilodaltons or about 75 kilodaltons on a non-reducing SDS-polyacrylamide gel to a

second DNA sequence which encodes all domains except the first domain of the constant region of the heavy chain of a human immunoglobulin.

101. (New): A method according to claim 100, wherein the first DNA sequence encodes the extracellular domain of an insoluble human TNF receptor.

102. (New): A method according to claim 100, wherein the human immunoglobulin is selected from the group consisting of IgG, IgA, IgM, and IgE.

103. (New): A method according to claim 102, wherein the human immunoglobulin is IgG or IgM.

104. (New): A method according to claim 103, wherein the human immunoglobulin is IgG1 or IgG3.

105. (New): A recombinant DNA construct produced by the method of claim 100.

106. (New): A recombinant DNA construct produced by the method of claim 101.

107. (New): A recombinant DNA construct produced by the method of claim 102.

108. (New): A recombinant DNA construct produced by the method of claim 103.

109. (New): A recombinant DNA construct produced by the method of claim 104.

~~110~~ 110. (New): A chimeric protein encoded by a recombinant DNA construct comprising a first DNA sequence fused to a second DNA sequence wherein the first DNA sequence encodes a soluble fragment of an insoluble human TNF receptor having an apparent molecular weight of about 55 kilodaltons or about 75 kilodaltons on a non-reducing SDS-polyacrylamide gel and the second DNA sequence encodes all domains except the first domain of the constant region of the heavy chain of a human immunoglobulin.

111. (New): A chimeric protein according to claim 110, wherein the first DNA sequence encodes the extracellular domain of an insoluble human TNF receptor.

112. (New): A chimeric protein according to claim 110, wherein the human immunoglobulin is selected from the group consisting of IgG, IgA, IgM, and IgE.

113. (New): A chimeric protein according to claim 112, wherein the human immunoglobulin is IgG or IgM.

114. (New): A chimeric protein according to claim 113, wherein the human immunoglobulin is IgG1 or IgG3.

~~115~~. (New): A method of making a chimeric protein comprising:

(a) providing a vector comprising a recombinant DNA construct comprising a first DNA sequence fused to a second DNA sequence wherein the first DNA sequence encodes a soluble fragment of an insoluble human TNF receptor having an apparent molecular weight of about 55 kilodaltons or about 75 kilodaltons on a non-reducing SDS-polyacrylamide gel and the second DNA sequence encodes all domains except the first domain of the constant region of the heavy chain of a human immunoglobulin;

(b) transforming a prokaryotic or eukaryotic host system with the vector;

(c) cultivating the host system; and

(d) isolating the chimeric protein from the host system or its culture supernatant.

116. (New): A method according to claim 115, wherein the first DNA sequence encodes the extracellular domain of an insoluble human TNF receptor.

117. (New): A method according to claim 115, wherein the human immunoglobulin is selected from the group consisting of IgG, IgA, IgM, and IgE.

118. (New): A method according to claim 117, wherein the human immunoglobulin is IgG or IgM.

119. (New): A method according to claim 118, wherein the human immunoglobulin is IgG1 or IgG3.

120. (New): A chimeric protein produced by the method of claim 115.

121. (New): A chimeric protein produced by the method of claim 116.

122. (New): A chimeric protein produced by the method of claim 117.

123. (New): A chimeric protein produced by the method of claim 118.

124. (New): A chimeric protein produced by the method of claim 119.